

(12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(19) World Intellectual Property Organization International Bureau



(43) International Publication Date
24 March 2005 (24.03.2005)

PCT

(10) International Publication Number
WO 2005/027553 A1

(51) International Patent Classification⁷: H04Q 7/36,
G08B 1/00

(21) International Application Number:
PCT/AU2004/001273

(22) International Filing Date:
17 September 2004 (17.09.2004)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:
2003905066 17 September 2003 (17.09.2003) AU

(71) Applicant (*for all designated States except US*): ICT SYSTEMS PTY LTD [AU/AU]; 30 Bouganville Street, Manuka, ACT 2603 (AU).

(72) Inventors; and

(75) Inventors/Applicants (*for US only*): BUTTS, Michael

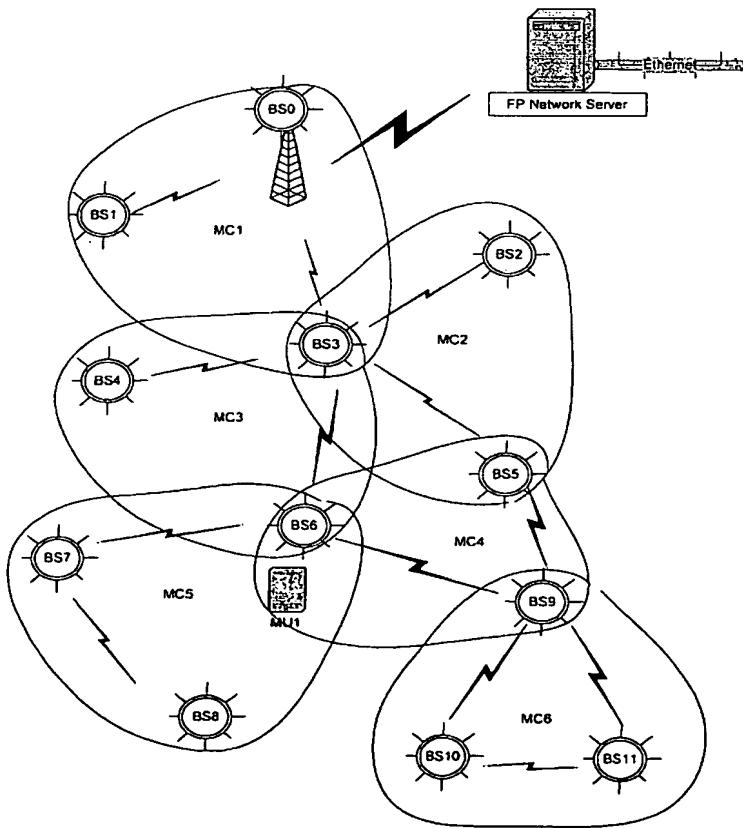
Stewart [AU/AU]; 83 Beatrice Street, Balgowlah, NSW 2093 (AU). KHOSKBIJARY, Amir Said [AU/AU]; 17 Conch Close, Trinity Beach, North Queensland 4879 (AU). MCCANN, Michael John [AU/AU]; 137 La Perouse Street, Narrabundah, ACT 2604 (AU).

(74) Agents: ALLEN, Leon et al.; Davies Collison Cave, 1 Nicholson Street, Melbourne, VIC 3000 (AU).

(81) Designated States (*unless otherwise indicated, for every kind of national protection available*): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.

[Continued on next page]

(54) Title: LOCATING SYSTEM UTILISING ADJUSTABLE TRANSMISSION POWER IN A MICRO-CELLULAR NETWORK



(57) Abstract: A communications system and a method of wireless communication for mobile units (MU) within a facility having a central controller (FP server), a plurality of wireless base stations (BS1-BS11) having an adjustable transmission power. The base stations are distributed throughout the facility for wireless communication with the controller and the mobile units (MU). The controller (FP server) configures the base stations (BS1-BS11) into a plurality of micro-cells (MC1-MC6) each including at least two base stations (BS1-BS11) by adjusting the wireless transmission power of the base stations (BS1-BS11) such that at least one base station (BS1-BS11) in each micro-cell (MC1-MC6) is a member of another micro-cell (MC1-MC6). At least one base station is able to communicate with the central controller (FP server) and all mobile units (MU) within a selected area of the facility are able to communicate with at least one base station (BS1-BS11).

WO 2005/027553 A1



(84) **Designated States** (*unless otherwise indicated, for every kind of regional protection available*): ARIPO (BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

Published:

— *with international search report*